Science of the Total Environment 634 (2018) 1593–1600

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

Analysis of environmental communication and its implication for sustainable development in Ethiopia

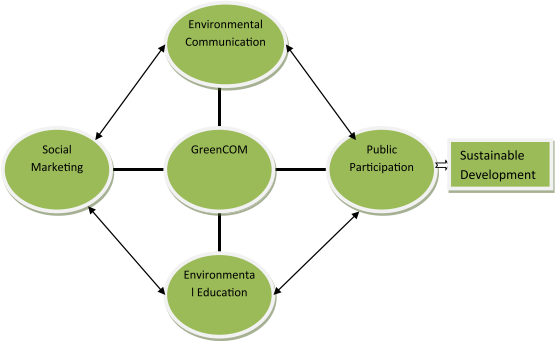
Mekonnen Hailemariam Zikargae, Assistant Prof.

Bahir Dar University, Humanities, Bahir Dar, Ethiopia

HIGHLIGHTS

- Ethiopia has been adversely affected by the environmental crisis.
- Environmental issues have got attention at the policy level; communicating the issues does not get much attention by the authority.
- Poor environmental systems, lack of awareness creation, weak public dialogue and genuine participation are identified in the authority.

GRAPHICAL ABSTRACT



ARTICLE INFO

Article history:
Received 22 November 2017
Received in revised form 29 March 2018
Accepted 4 April 2018
Available online 18 April 2018

Editor: Simon Pollard

Keywords:
Environmental communication
Ethiopia
GreenCOM
Dialogue
Participation

ABSTRACT

Background: Environmental issues have been causing debates around the globe. These issues have also got much attention in Ethiopia. Ethiopia has been adversely affected by the environmental crisis. Developing countries and the poor were depicted as unfortunate victims of climate change. The causes of climate change include deforestation, industries, mismanagement of the environment, and utilization of natural resources. One of the effects of climate change brought natural disaster what we call a drought. Drought affected many people, even recently, in Ethiopia. Concerning the environmental problems and issues in Ethiopia, there are beginnings at the policy level. However, the practical aspects of communicating and addressing these issues could not get much attention from the authority.
Objective: The aim of the research is to analyze environmental communication of Amhara National Regional State-Environmental Protection Authority.
Method: Case study as a qualitative research method is used. The case design type is descriptive. The researcher selected two techniques of collecting data: in-depth interview and documents.
Results: The results show that the authority is unable to communicate environmental issues which were stated in the different conventions and policies.
Conclusion: There are gaps that could be considered from the outcome of the research. The major gaps and challenges in addressing practical issues of environment are identified namely poor environmental information systems, lack of awareness creation through communications, and weak public dialogue and genuine participation consideration.

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E-mail address: mekozikargae@gmail.com

https://doi.org/10.1016/j.scitotenv.2018.04.050
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1. Introduction

Environmental challenges are indispensable issues among world leaders (Willis, 2014). Environmental issues have been a problem that affects the economy that intern impact the politics among governments. According to Irish policy report (Irish Aid Report, 2016) in the Ethiopian context environment as a mainstreaming should base on the incorporation of environmental sustainability by infusing into development policy, planning, and any other program implemented in the country. The staff should carry out the necessary analysis to dig out the environmental implications of their work and to take the necessary measures to ensure the sustainability of the environment. Environmental survival leads them to economic survival which in turn affects political survival. It also has implication to ensure sustainability of environment and development. The developing countries like Ethiopia most adversely facing a real challenge of environmental problems in Eastern Africa.

The European Environment Agency (EEA) report (2016, p.3) also emphasized that:

> Environmental challenges are often systemic and complex. For example, the environmental impacts of food production on the global climate, air, and water quality cannot be disconnected from the basic human need for food, production and distribution processes, dietary preferences as well as food waste- all the components of the food system. Communicating this complex and systemic nature of environmental challenges is not always easy. Moreover, although it is constantly improving, the body of scientific knowledge on the environment comes with varying degrees of uncertainty and gaps.

Hence, developing countries and the poor were depicted as unfortunate victims of climate change. The causes of climate change include deforestation, industries, mismanagement of the environment, and utilization of natural resources. One of the effects of climate change brought natural disaster what we call a drought. The drought affected many people, even recently, in Ethiopia.

The Irish policy (Irish Aid Report, 2016) report shows the inter-linkage of environment and poverty in Ethiopia that is indicated as:

> The majority of the world's poor men and women are directly reliant on their environment for survival. Their livelihoods are based on the use of natural resources for agriculture, fishing, livestock rearing, forestry and traditional medicines. A reduction in the quantity or quality of these resources has a direct impact on the well-being and vulnerability of the poorest members of society. In addition, poor men and women tend to live in the most marginal, degraded and polluted environments, such as densely populated inner cities and areas prone to flooding. This puts them at high risk from disease and the impacts of natural and man-made disasters.

The risks are becoming an issue of a public, policy maker, local actors, international actors, and media. Thus, having had the above scenario, this study found that communication is very significant to enhance policy implementation and communication enables public participation and engagement. Therefore, communication as a policy tool is important in which policy and communications are mutually inseparable (EEA, 2016). Moreover, environmental communication is communication that deepens mutual understanding and agreement by providing information about environmental initiatives, such as efforts to reduce environmental load and promote environmental preservation, and also by listening and having dialogue with stakeholders to establish partnership among the individuals, administrations, corporations, and private non-profit organizations that are the main agents in creating a sustainable society. Thus, communication is indispensable strategies and tools to address environmental problems.

According to Carvalho (2009), communication is a key to analyzing the relationship between all of these aspects environmental problems, human perceptions, attitudes, behaviors, values, preferences, and beliefs about the world. This thematic issue reports on research which provides insights into how we can communicate environmental issues effectively and appropriately. Communication plays a central role in shaping our understanding of the natural world and the role of humans therein. Such understandings, in turn, influence the way we act and our support for, or opposition to, specific policies. In addition, communication is the terrain where diverse points of view are negotiated.

Therefore, different forms of message among stakeholders could be central to the issue of environmental communication. The environmental communication could be one of the activities and a discipline which could work in creating awareness about environmental problems. Environmental communication is one of the strands of the green communication discipline. The other strands are social marketing, environmental education and public participation (Day and Monroe, 2000) which are not included in this study due to the scope of the research. Therefore, this study aims to analyze those data from different sources about environmental communication basically the internal and external environmental communication of Amhara National Regional State (ANRS)-Environmental, Forest and Wildlife Protection and Development Authority. The paper organized as research problems and questions, objective, significance, related research, theoretical framework and method of the research.

1.1. Theoretical framework: environmental communication

1.1.1. Green communication

According to Day and Monroe (2000), Green communication (GreenCOM) draws on four complementary disciplines and works closely with practitioners in the four fields. The strands are social marketing, environmental communication, environmental education, and public participation. These strands are also provided in Ethiopian environmental protection and development policy. The researcher needs to provide the basic conceptual integration of the four strands as follows (Fig. 1).

1.1.2. Environmental communication

Environmental communication is defined as the social and symbolic constructions of environment, public participation in environmental decisions, conflict resolution, environmental journalism, social media, environmental advocacy campaigns, science communication, environmental justice and climate justice movements, risk communication, green marketing, and corporate advocacy campaigns (Cox, 2013).

Environmental communication is any kind of environmentally relevant information flow that uses different communication channels. It is any communication that includes communication of environmental messages to audiences by all means and through all channels. It involves interactive listening and public discussion and debate. Communication that establishes the relationship between the people and environment as a means of enhancing environmental literacy and sustainable environment practices (ECRC, 2005). It is communication about environmental affairs that include all of the diverse interpersonal, group, public, organizations, and mediated communication that makes up the social debate. In addition, it is also an interdisciplinary field of study that requires professional practice.

Environmental communication can improve and enhance environmental performance and address climate change that contributes to green growth. Scholars (Day & Monroe, 2000) describe "environmental communicators create strategies for reaching certain audiences, they develop messages and select the appropriate media to reach these audiences", p.4; "….the goal is to instill in learners the knowledge about the environment, positive attitudes toward the environment, competency in citizen action skills, and a sense of empowerment" p.5. The aim of environmental communication, like any other development issue, is to bring a positive change in the living conditions of people. According to FAO (1994), communication for development should change people's lifestyle through awareness, peer counseling technique of interpersonal

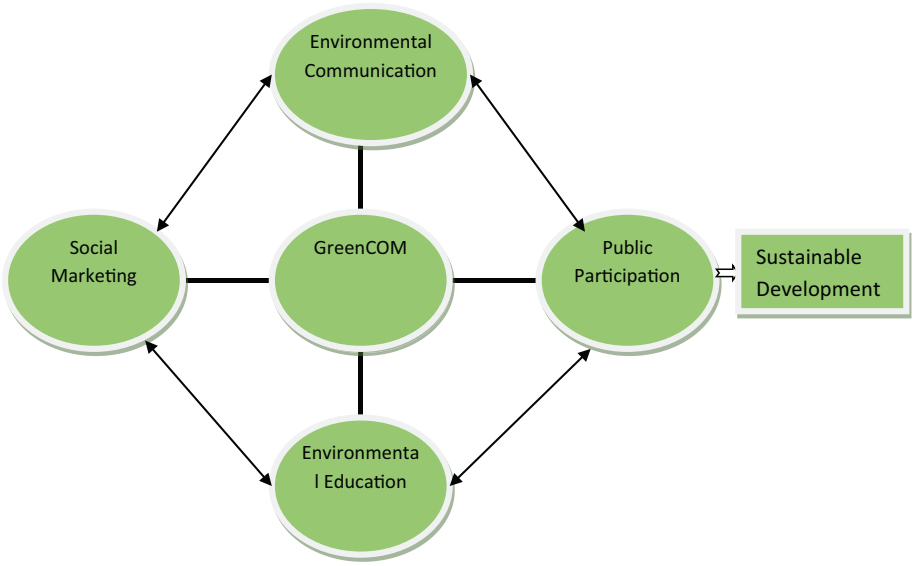

Fig. 1. Conceptual framework of GreenCOM.

communication, and social communication methods to pioneer attitudinal changes. Environmental communication is linked with sustainable development which can be successful if it is based on sufficient, reliable, and comparable information, free access to information and unhindered information flow that ensures the exchange of environmentally relevant information.

The principles, methods, and tools of strategic communication for sustainable development are derived from a mix of different fields and approaches. For instance, development and environmental communication are among the five branches of strategic communication for sustainable development. Therefore, strategies for sustainable development are all coordinated set of participatory and continuously improving processes of analysis, debate, capacity strengthening, planning, and investment. This integrates the economic, social and environmental objectives of society, seeking tradeoffs where this is not possible (OECD 2002 cited in GTZ, 2006).

Environmental communication of an authority can be divided into two perspectives as internal and external environmental communication.

1.1.3. Internal environmental communication

The authority can provide environmental information that needs to raise employees' awareness so as to promote their active participation as responsive citizens in environmental efforts. Internal environmental communications entail a communication that considers environmental issues of an authority among individuals of the authority. This kind of communication builds strong identity image of the officials and employees of an authority. According to Social and Environmental Report-SER (2005), the major internal environmental activities consists of environmental education, environmental awareness (awards, seminars, film screenings, environmental news), and environmental information sharing (newsletters, magazines, feature articles, information posting). In addition, it may be accomplished by the use of notice boards, and awareness training of facility personnel, as appropriate in line with job function, environmental training of relevant job functions, as appropriate, electronic notes, meetings, and management reviews.

1.1.4. External environmental communication

To deepen the awareness and understanding of stakeholders requires the use of social and environmental activities, websites, newspapers, open forums and advertisements. Accordingly, the major external environmental communication activities entail environmental information disclosure, environmental public relations, community dialogue, stakeholders' dialogue, the introduction of environmental efforts at trade shows and events, and the introduction of environmental efforts to the local communities (SER, 2005).

1.2. The problem

Communication capacity is very important in creating awareness towards environmental issues and problems. Tadesse (2015, p.4) for instance, emphasizes the use of mass media to disseminate environmental issues, diffusion of innovations and set agenda for development:

> Global warming and climate change are the hot and prioritized environmental problem topics in the global mass media. Both the government and the people depend on communication and mass media not only for disseminating information but also for setting the agenda for development and other related activities. Hence, mass media become a powerful tool for disseminating information and diffusion of innovations on how to mitigate environmental problems.

Environmental communication problems such as level of awareness and information, dissemination of environmental issues among stakeholders, implementation of communication strategies and the linkage of mass media with stakeholders are full of problems which could be indicated in this article.

1.3. Research objective

The aim of the research is to analyze internal and external environmental communication of Amhara National Regional State (ANRS) Environmental Protection Authority. In addition, recommendations will be given on how the authority can improve its environmental communication and get a more efficient internal and external communication strategy.

1.3.1. Specific objectives

Accordingly, the study seeks:

a) to identify how ANRS Environmental Protection Authority internal and external environmental communication channels are utilized.
b) to explore how the authority effectively communicates environmental information to ANRS Environmental Protection Authority internal and external stakeholders with mass media.

c) to identify the challenges or factors that hinder to achieve environmental communications by the authority.

1.4. Research questions

To meet with aims of the objectives, the study sets out three research questions that will be answered.

Q1: How the authority is effectively utilizing communication channels to address internal and external stakeholders?

Q2: How the authority is using mass media in cases of internal and external environmental communication?

Q3: What are the challenges or factors that hinder internal and external environmental communication?

1.5. The significance

Any research activities on global issues like environmental are one of the support of the current environmental problems that could suggest alternative and innovative ideas for further intervention at all levels of the society. This means that the findings can fill and enhance or boost up the existing knowledge gap of environmental issues among stakeholders (the authority, the actors, the public and the advocator). In addition, its finding could be a hallmark contributor of program amendments and designs, policy formulation, and intervention at individual, community or society level. It could also provide practical experience in the teaching-learning process, research and community services. That is the resource of the process as an input. The last, but not the least, one is important if it contributes to the scientific community. This research, then, is an initial step and part of the future Ph.D. dissertation of mine. Moreover, the finding provides credibility and integrity of an authority and the stakeholders. Further, the authority can use as an initial point to revisit policy as well as the communication strategy. At least, it could be a source of ideas and experiences for further research. And it provides further implication related to sustainable development. In summary, the research findings are vital resources in research, community services, teaching-learning processes, scientific communities, the authority and stakeholders, program and policy formulations, Ph.D. dissertation, and potential sources of public dialogue.

2. Method

2.1. Case study

Case studies are a very useful way to illustrate the type of work that is done in an institution. Berg (2001) uses different data gathering measures. Case studies provide an analysis of the relationship between a challenge and a solution and cause-effect (Kothari, 2004; Blaxter et al., 2006; Berg, 2001; Cohen et al., 2007). Blaxter et al., (2006, p. 72) indicates "…the needs and resources of the small-scale researcher. …used to illustrate problems or indicate good practices". A case study is a systematic gathering of information that entails a comprehensive study of a social unit (Kothari, 2004; Berg, 2001; Cohen et al., 2007). Scholars (Kothari, 2004; Blaxter et al., 2006; Berg, 2001) consider exploratory, explanatory and descriptive case studies. The most suited approach to this research is descriptive one.

2.2. Data collection

There are three techniques of collecting data such as in-depth interview and documents including media, policy, proclamation, and other communication documents the main tools considered for the research (Blaxter et al., 2006; Berg, 2001; Bhattacherjee, 2012). Blaxter et al. (2006, p.172) "The unstructured interview has been variously described as naturalistic, autobiographical, in-depth, narrative or non-directive". The purpose of these interviews is to develop a deeper understanding of how an authority communicates environmental issues and problems. The interview method involves questioning or discussing issues with people which could not be accessible using observation and questionnaires (Bhattacherjee, 2012; Blaxter et al., 2006; Seidman, 2006). Thus, for the purpose of this research, the researcher interviewed four anonymous experts of Amhara National Regional State Environmental Protection Authority which is the first predominant methods used to elicit data. The first interviewee (I1) is a representative of environment and development awareness section. The second interviewee (I2) is from environmental education section. The third interviewee (I3) is from environmental evaluation and monitoring licensing section. The last interviewee (I4) is from Climate Resilient Green Economy (CRGE) section. The second method is used document analysis that considers proclamation and other related policy as secondary data collection methods. According to Blaxter et al. (2006, p.168), "all research projects involve the use and analysis of documents". The researcher can use different approaches in this regard that may take a form of a library-based, computer-based, work-based, and a historical orientation (Blaxter et al., 2006). In addition, authority guidelines such as the federal and regional legislative and institutional framework, policies, procedures, guidelines etc. will be reviewed. Thus, there is no doubt that documents are an invaluable methodological tool. Media documents are vital to collect data. In addition, the researcher watched documentary coverage of Amhara Mass Media TV concerning environmental problems of leather factories around Bahir Dar city. Therefore, the case studies employed thoroughly and carefully the data collection tools or techniques in the research. In summary, the techniques are in-depth interview and document. To this end, the researcher predominantly used both in-depth interview and documents as the tools of data gathering for the aim of the research. The collected data are analyzed based on the major thematic approach that could be used in the case of environmental communication.

3. Results and discussions

This part shows some issues of environmental communication problems of overall communication in the authority. For instance, the interview conducted with four interviewees (I1, I2, I3, and I4) show that environmental communication among the different stakeholders is not designed at the authority level. There are different attempts to consider and to address at global and local level.

At a global level, environmental policy is considered as a tool to internal and external environmental communication. The attempted policies according to Rio+20 National Assessment Report (2012) since 1992 to then the FDRE government has produced the Rio+5, Rio+10, International Conference on Population and Development (ICPD) +5, ICPD+10, and ICPD+15 progress reports and has actively participated in all preparatory and major conferences related to environment and development which considers environmental development as one of the main components of sustainable development [1992–2012].

At a local or country level, Ethiopia is a signatory to a number of multilateral agreements that have bearing on the sustainable development efforts of the country. However, the country faces daunting challenges. To address the challenges, there are many opportunities and entry points for pursuing a more holistic way to address the complex interactions between humans, their health, and the environment in Ethiopia in general (Patterson, 2007). It's also possible to increase community networks, knowledge and access to education. For instance, Ethiopia has signed and/or ratified many of the international conventions and protocols and some of the important conventions are as follows:

- The United Nations Framework Convention on Climate Change (UNFCCC)-1992
- The Convention on Biological Diversity-1994
- The United Nations Convention to Combat Desertification-1994

- Bio-safety Protocol-2000
- Stockholm Convention-2001

Likewise, the Ethiopian government has put in place a number of policies, regulations, guidelines, strategies, and laws that are designed to support sustainable development. The environmental policies, laws, regulations, and proclamations are also designed to communicate, and in a way to support sustainable development. According to Ministry of Environments, Forest, and Climate Change (MEFCC) the goal of the policy, for instance (2016, p.4) is:

> the overall goal of national environment policy is to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment as a whole so as to meet the needs of the present generation without compromising the ability of the future generations to meet their own needs.

The aim of the Ethiopian environment policy's goal provides some objectives of the policy (MEFCC, 2016) which planned to raise public awareness and promote understanding of the essential linkages between environment and development. The implementation of the policy could be guided mainly with the emphasis on public participation, and it follows participation approach.

In addition, gender inclusiveness, community empowerment, and integrity of both sustainable development and environmental protection could be considered guiding principles of the policy wherein the government's focus on agricultural and industrial development has potentially large implications for Ethiopia's environment. This potential conflict between environmental protection and economic development goals was addressed by ensuring the harmonization of sustainable development and environmental sustainability. According to the informants there is a paradox of the policy. On one hand, the policy states that the integrity of sustainable development and environmental protection are the essential part of the development process. That is a disharmony between sustainable development and environmental protection activities. On the contrary, the environmental protection body wants to preserve the environmental safety by providing the projects with a certificate.

Therefore, the environmental authority certifies the project according to the information provided by the consultants of the project (I1). For instance, Federal NegaritGazeta of the FDRE regulation no 159/2008 (2009, p.3) states that "the competent licensing agency can grant a license to a factory after verifying that the effluent is not a pollutant or will not exceed the limit set under the relevant environmental standard and it will not entail damage if released into the environment". The overall goal of environmental communication is to help people live more environmentally friendly and to help individuals and groups begin a self-directed and lifelong learning process.

In such cases, some of the projects come up with "pseudo-information how to dispose of the byproducts of the development projects during its implementation" (I1). The paradox lies lack of that the respected authority issues a land for development projects without considering the compatibility of the project with the nearby environments and community. Thus, the conflict arises after the implementation of the development projects (I1). For instance, the authority and the public highly criticize the establishment of Bahir Dar tannery that does not have an appropriate disposal of wastes that dumps into the river. According to I1these practices brought misunderstanding, miscommunication and conflicting issues among the community and the government, the factory owners, and even the authority.

The key component of environmental communication and management is about the implementation of the policies. Implementation refers to the efforts made to execute the policies (Weimer and Vining, 2005). According to these (ibid) scholars, another aspect of policy implementation concerns the cooperation of many actors. Actors in environmental policy issues range from the external environmental communication of government bodies (at federal, regional and local level) to civil society, authority, academics, scientists, think thanks, corporations, and the general public. Not only actors but also public participation are important factors in external environmental communication which could explain in Federal NegaritGazeta of the FDRE Proclamation No. 299/2002 (2002, p.5) that "the Authority or the relevant regional environmental agency shall make environmental impact study report accessible to the public and solicit it, comments on it".

Therefore, the practice and the policy are in a paradox; they simply contradict each other. As a result, one is an obstacle to the other than an opportunity to external environmental communication that provides the integrity of sustainable development and environmental policy in further cooperation and collaboration. To this end, no any mechanism or opportunity to communicate policy issues with stakeholders. The awareness level policy as a communication tool is at its minimal stage. Hence, policy communication with stakeholders as one of the strategy and opportunity of external environmental communication considered as a huge gap in the authority. In summary, the government focus on agricultural and industrial development has potentially large implications for Ethiopia's environment sustainability. This potential conflict between environmental protection and economic development goals was addressed to ensure the harmonization of sustainable development and environmental sustainability. This hampers the communication as of stakeholders and the authority.

One of the scenarios of the Authority which reinforces the above-sought problems could be supported and described as follows:

> One of the methodologies we use is informal and formal education by forming environmental clubs at sub-local level. In order to ensure this, some basic skills training are given to for the stakeholders (different sectors in the region) and clubs. The training among stakeholders did not address the concerned communication experts of other authority. They simply send us inappropriate personnel from the inappropriate department. Still, we are working to identify gaps that need to address. We are also inefficient to use many opportunities such as special events, world environment day, non-governmental authority support, visiting and panel discussions that are some of the potentials that underutilized. Our section of the authority even did not know what budgets allocated for such purposes. Besides, the authority focuses on environmental assessment and monitoring section of the authority which has been considered as a challenge in our communication. This challenge is due to the perception and attitude of those who are leading the authority. There is also no clear demarcation between public relations and awareness creation. Moreover, the authority has no opportunities, budgets, and facilities towards the use of communication tools like mass media (I2).

In summary, first, the basic skills training in the informal and formal education are not successful. Second, intersect oral collaboration is not going on as it was desired by the authority. Third, the authority is not working in the way to seize some of the opportunities with other stakeholders. Fourth, the authority merely focuses on some aspects of the authority like issuing the license. At last, perception and attitude barriers as well as insufficient resource allocated inability to seize the opportunity and use of mass media.

3.1. Gaps and challenges in environmental communication

Environmental communication is a communication about all activities related to environmental issues and prioritizing these issues. The environmental problems and issues in Ethiopia are concerned there are signs of a positive beginning at policy levels. For instance, the government has some commitment to environmental issues by the enactment of new laws, establishment of environmental units in some

sectoral offices, some trainings, assessment and monitoring opportunities in addition to the government humble communications on an international meeting as it hopes to ensure sustainable development in the country (I1, I3 & I4). As it is stated by Tadesse (EPA, 1997 cited in Tadesse, 2015):

> information is very crucial for decision making on environmental issues and for the dissemination of current environmental information to the public at large. In view of the pivotal role that information plays, the environmental policy has incorporated it as one of the cross-sectoral policy issues (EPA). The environmental policy of Ethiopia designed in 1997 emphasizes the need for environmental education and awareness to have a population with knowledge, skills, attitudes, motivation, and commitment enabling to work individually and collectively towards solutions of current and future environmental problems.

However, the practical aspects of communicating these issues could not get much attention by the authority (I1, I2, and I3&I4). That means there are major gaps and challenges in addressing practical issues of the environment among the authority members and the stakeholders. The researcher as discussed above identified some thematic areas that show challenges as poor environmental information systems, lack of awareness creation through communications, and weak public dialogue and participation.

3.2. Environmental information systems

There is no website that designates a separate office for environmental information purpose getting an access even to list of environmental proclamations, regulations, directives, magazines, guidelines, and fact sheets are hardly possible to access (I1, I2, I3, &I4). In addition, sometimes those environmental agencies teach the public about environmental issues and problems. According to the researcher's review on documents, the policies, laws, regulations, proclamations and other directives even do not show the way how to use websites and other communication tools for both internal and external environmental communication. As such, there is no mechanism to manage information and data of the authority. It also has no documentation system. All interviewees confirmed that, in the region, much of the information focuses on land administration works than the environmental protection that goes in line with development process (I1, I2, I3, &I4).

3.3. Awareness

Global meetings and conferences emphasize the importance and a collective integration of awareness creation through education (formal, non-formal, informal) and mass media as a potential means to achieve sustainable development goals. However, environmental awareness in Ethiopia at the regional level could be very low (I1 & I4). According to the interviewees (I1, I2, I3 & I4), one of the reasons for such low level of knowledge about environmental issues and problems is that the lawmaking process has not been participatory. The law, policies, proclamations, and guidelines have been enacted without the sufficient participation of all stakeholders. In addition, local people who can be directly affected by a development project have never been communicated and consulted during the lawmaking (proclamation) process and implementation of the projects.

Moreover, local government officials are the key actors in the environmental problems and issues. However, there is a complete absence of information about it and officials consider it, misconceptions, as a process that is designed to make development activities difficult and officially consider the communication of the authority as anti-development activities (I1 & I4). This indicates that a disharmony of the development process and environmental policies as if they do not supplement each other. Further, government, project owners, and investors have inadequate awareness about the importance of environmental protection authority policies. They generally perceive it as a bureaucratic hurdle with no visible importance. They consider it as public and governmental resistance against their development projects and seen as a threat to investment and other development activities rather than a tool for sustainable development. It is hard to say our development is sustainable unless there could be opting to attain economic development together with social development and environmental protection (I1& I2).

Therefore, sustainable development has to realize the contexts of environmental and social realities. In the long-run, it would be suicidal. These could be resulted from lack of meaningful internet services to communicate with many actors, project awareness, consulting firms, government offices, international organizations, and so on. The internet with websites and social media useful communication tools to external environmental communications that involve exchanging different relevant environmental information documents. Thus, the authority is poorly organized and has a negligible capacity to communicate with the stakeholders such as regional government actors, international and local actors, mass media, and the public. In summary, the level of awareness and information about environmental issues among decision-makers and other actors as well as among the general public in the region is indicated as significantly low in ANRS Environmental Protection Authority. There is a need, therefore, to provide for measures to promote and facilitate public awareness information and education through the strategy of environmental communication. Awareness raising and communications are important as a regional level achievement.

3.4. Public dialogue and participation

According to Grieser (cited in Day & Monroe, 2000, p.17), "the new methods proceeded from the promise that people have a right to be part of decisions that affect their lives". In addition, people have a right to be informed on public decisions and interventions (Chanie and Sonderling, 2017). Grieser as cited in Day and Monroe (2000, p.17), explains the participatory approach to development in terms of project involvement as:

> A participatory project aims to involve as many local stakeholders as possible in the process of formulating, designing, implementing and evaluating programs in the hope of making development self-directing, fair, and self-sustaining….participatory development assumes that a diverse group of stakeholders brings sufficient wisdom—technical, social, and political—to produce a sound project….the process of participation can benefit projects in health, and infrastructure as well as environmental education. GreenCOM's experiences are each unique, but the lessons learned could be applied to communication and development professionals operating anywhere.

Accordingly, a diverse range of stakeholders is important to bring the desired effect. Using the public, authority, stakeholders, partners, activists, and institutions concerned with environmental issues to participate in planning and implementing environmental policies and emphasizing the joint responsibility for environmental problems. I1 confirmed that "the participation of ordinary citizens, environmentalists, and industry owners in environmental decision making of an authority is the issues of environmental problems that didn't get much attention by all concerned body". Public access to information and the right to know about the environmental information depends on the public disclosure of information.

3.5. Mass media integration

Ahmad et al. (2015) asserted that choosing appropriate way out is very important in environmental education. Developing interest in environmental problems among the media was not an easy task. For

instance, GreenCOM supported numerous meetings with the owners and managers of the different media, selling the idea that environmental topics were inescapable and that the communications media had the opportunity to get ahead by anticipating the interests of their readers, radio listeners, and television viewers. External communication through public mass media is for the most part characterized by news coverage of environmental events; without utilization of these mass media impossible to achieve more awareness and educational goals of authority.

According to I4, another scenario,

> there are six sectors identified as the major contributor to environmental pollution in Ethiopia. Among this agriculture and forest are 50% and 37% are the major contributor respectively. In order to reduce this emission to the environment, the government of Ethiopia used to communicate among the world leaders by establishing a strategy which is known as Climate Resilient Green Economy (CRGE). The principle of environmental policy and CRGE strategy are advocated and promoted at the national and international discussion, presentation and other forums by the government official; however, the policy in different sectors are not feasible and not practiced as the tone of the government ad-hoc mouth word advertisement among world leaders and through mass media. No indication of policy how to integrate mass media in the environmental issues. In our part, a limited workshop conducted in collaboration with other sectors in the region. Even the motives among officials for the CRGE strategy to communicate with us can be declined. Besides, there is no access to mass media due to the high cost to run prepare and run a program.

In the informal education, in particular, the mass media is clearly important to produce synergistic effects as individual receive environmental messages through more than one channel. The communication can also play an important role in linking the public to policymakers to establish direct lines of communication by participating at grass root levels. As a result, new communication tools such as social media, as well as new ways of using those tools have made these links easier to forge. These are important because community groups have become more sophisticated about the use of, and access to, communication media. However, according to some interviewees (I1, I2 & I3), the external communication in the authority is characterized by the weakness in institutional capabilities required for effective external communication to successfully integrate the mass media into environmental issues. There are different weaknesses which incorporate a financial weakness, a technical weakness, and an administrative weakness in the institutional structures that mandated to activate environmental communication. The authority is responsible for the national strategy that should take on the responsibility of providing environmental information to the media or serving a link between the media and specialized sources of information. The authority didn't use mass media and there was no regular airtime program due to the financial weakness and other capacities (I2).

However, the authority, very recently, in collaboration with Amhara Television, used a documentary program regarding water hyacinth problems observed in six different areas around the Lake Tana Peninsula. This could be initiated by the Amhara media journalists. Lacks plan until recently how to integrate media and use it for further environmental awareness at the authority level (I3). Thus, there is no media coverage of the environmental issues initiated by the authority which implies that there is a weak integration of the mass media. Weak communication effectiveness on the flow of environmental information through different communication media to all categories of target people was confirmed by the authority.

3.6. Implication on sustainable development

According to Saeed et al. (1998, p.4), "a key issue for many countries in the region is to integrate environment into development policy and to use communication and education in an integrated way as an instrument of policy". Environmentally sustainable development requires a healthy political environment, characterized by environmentally aware leaders and greater popular participation in decision making. Effective communication of policies, laws and regulations can empower citizens to make eventually beneficial choices as stakeholders. To empower citizens, the capable institutions implement policy, advocates reform, and educate both the people and their leaders. As stakeholders, people catalyze policy change. They can organize, advocate, and elevate local issues and concerns to national policy fora. As the complexity of achieving environmentally sustainable development is increasingly appreciated, the involvement of multiple stakeholders becomes factors. Eventually, sustainable development also calls for building bridges between groups, such as industry and environmental authority that sometimes find them in adversarial positions.

Therefore, environmental and communication strategies contribute to three, interrelated facts of the policy process that consists of formulation, articulation, and implementation as a tool and input to sustainable development. Formulation form of good policies hinges on getting input from the people about their needs and wants. A policy needs to be explained and it bridges the information gap between governments, stakeholders and public, the national level, and local communities, and producers, and consumers. Environmental education and communication can ensure that policies are explained to all members of a community, and can establish feedback mechanisms to examine, consequences for environmental, social, economic, and cultural impact. To implement such policies more effectively, environmental education and communication build the capacity of national and local institutions to educate, inform, and communicate. Environmental education and communication by governments, interest groups, political parties, and others, help legitimize and activate policies. In summary, the environmental communication at the country level, as well as the regional level, has implications for sustainable development. This implication focuses on areas of policy formulation, articulation, and implementation.

4. Conclusion

Environmental issues are debatable around the globe since the issues have been a devastating effect on human life. As a result, Ethiopia is also a country that considers this phenomenon that needs much attention. In fact, Ethiopia has been adversely affected by the environmental crisis during different times. Climate change and natural disasters are the manifestations of these adverse environmental conditions in the country. The need to address the issue the EPRDF opts for the different strategy like the policy of Green Economy in Ethiopia. This could also be evidenced as the best strategy for addressing the depletion of Ozone layer. One of the options to address environmental issues as a strategy is to consider environmental communication as one of the strands of GreenCOM. Hence, this research is aimed to analyze environmental communication of Amhara National Regional State-Environmental Protection Authority. The qualitative data collected using interview, documents, videos and mass media are provided some gaps in this strategy. In addition, the elicited data analyzed qualitatively. The result shows that the environmental problems and issues in Ethiopia have not yet well communicated. At policy level, there are some signposts of considering the environmental issues that should go hand in hand with the development policy. However, the policy and the practice could not be as expected even by the government. In addition to the country policy, Ethiopia also signed different conventions and protocols as of The United Nations Framework Convention on Climate Change (UNFCCC), The Convention on Biological Diversity, The United Nations Convention to Combat Desertification, Bio-safety Protocol, and Stockholm Convention. As far as the concern of the policy and the demand of the government, the environmental policy practice and sustainable development policy practice are in a paradox. That is they are contradicting each other in practice. For instance, the environmental policy

implementation considered to be the roadblock to the practice of the development and vice-versa. In addition, the practical aspects of communicating these issues could not get much attention by the authority. That means there are major gaps and challenges in addressing practical issues of the environment. The concerned experts could not entertain the communication strategy. Based on the data the researcher identified some gaps to at the implementation of the environmental policy of the country. The gaps are identified as poor environmental information systems, lack of awareness creation through communications, and weak public dialogue and participation.

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